

Claims

What is claimed is:

2003
C-121

1. A drawing method for displaying image data about a plurality of objects including opaque objects and semitransparent objects, each having information about a depth direction, on a computer display screen by using an updatable Z-buffer as a storage, said method comprising the steps of:

drawing said opaque object alone of the image data, while updating said Z-buffer and executing a hidden surface removal by said Z-buffer algorithm;

drawing said semitransparent object alone of the image data without updating said Z-buffer and while executing the hidden surface removal by said Z-buffer algorithm; and

drawing said semitransparent object alone of the image data, while updating said Z-buffer and executing the hidden surface removal by said Z-buffer algorithm.

2. The method according to claim 1, wherein said steps of drawing said semitransparent object are executed by alpha blending.

3. A drawing apparatus which can display image data about a plurality of objects including opaque objects and semitransparent objects, each having information about a depth direction, on a computer display screen, said apparatus comprising:

an updatable Z-buffer corresponding to each dot on the computer display screen, for storing the depth information;

an updatable frame buffer corresponding to each dot on the computer display screen, said frame buffer being capable of outputting the contents therein to the display screen, for storing the data to be displayed; and

a rendering engine, said engine receiving the image data and then comparing the depth information on the image data to be now drawn to the depth information that is already stored in said Z-buffer, thereby permitting judging whether or not the depth information on the image data to be now drawn is larger than the depth information that is already stored in said Z-buffer, said engine being capable of selecting either outputting the data to be displayed while updating the depth information or outputting the data to be displayed without updating the depth information, and said engine being capable of reading the data to be displayed that is already stored in said frame buffer and then blending the read data with the image data received thereafter for each dot on the computer display screen.

4. The apparatus according to claim 3, further comprising:

a display device being capable of displaying the data to be displayed that is outputted from said frame buffer on the display screen.

5. The apparatus according to claim 3, wherein the blending for said semitransparent object is executed by alpha blending.

6. A raster scan display which can execute the drawing method of claim 1 ~~or 2~~.

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